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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
MISSOULA DIVISION

CROW INDIAN TRIBE et al.,

Plaintiffs,

vs.

UNITED STATES OF AMERICA et
al.,

Federal-Defendants.

And

STATE OF WYOMING, et al.,

CV 17-89-M-DLC
(Consolidated with Case
Nos. CV 17-117-M-DLC,
CV 17-118-M-DLC,
CV 17-119-M-DLC, and
CV 17-123-M-DLC)

JOINT RESPONSE TO
FEDERAL
DEFENDANTS'
STATEMENT OF
UNDISPUTED FACTS

Pursuant to Local Rule 56.1(b), and in accordance with this Court's May 14, 2018 order (ECF_178:4), Plaintiffs in *Crow Indian Tribe et al*, No. 17-89, *Humane Society of the U.S. et al*, No. 17-117, *WildEarth Guardians*, No. 17-118, *Northern Cheyenne Tribe et al*, No. 17-119 and *Alliance for the Wild Rockies et al*, No. 17-123 ("Organizational Plaintiffs") in these consolidated cases submit this joint response to Federal Defendants' Statement of Undisputed Facts (ECF_204).

The Grizzly Bear Species

1. *The grizzly bear subspecies in North America (Ursus arctos horribilis) is a member of the brown bear species found across North America, Europe, and Asia. FWS_Rel_Docs:1438. Grizzly bears are generally larger than other bears — ranging from 400 to 600 pounds for males and 250 to 350 pounds for females in the lower 48 States — and they live to be around 25 years old in the wild. Id.; FWS_LIT:14543 (noting reports of longer-lived grizzlies in the wild).*

Response: Undisputed.

2. *Males have larger home range sizes than females (300 mi² and 81 mi², respectively), which enhances “maintenance of genetic diversity in the population by enabling males to mate with numerous females.” FWS_Rel_Docs:1438. Grizzlies typically do not start reproducing until they are four years old and then generally reproduce only once every three years. Id.:1439.*

Response: Undisputed. Note also that grizzly bears have one of the slowest reproductive rates among terrestrial mammals as well. FWS_LIT:019230. In the Yellowstone region, the average age of first reproduction by a grizzly is six years old and the average time between litters in the Yellowstone region is 2.78 years. *Id.* It may take a female grizzly bear ten or more years to replace herself in the population. *Id.* The grizzly bear’s limited reproductive capacity “precludes any rapid increase in the population.” FWS_LIT:014545.

3. *Grizzlies are opportunistic omnivores that consume a variety of foods and shift food habits depending on what is available. FWS_Rel_Docs:1438. In the Greater Yellowstone Ecosystem, researchers have documented over 266 species of foods*

consumed by grizzly bears. Id. (discussing Gunther et al. 2014, FWS_LIT:22379). “The ability to use whatever food resources are available is one reason grizzly bears are the most widely distributed bear species in the world, occupying habitats from deserts to alpine mountains and everything in between.” Id.

Response: Undisputed. However, for clarification, note also that certain foods — such as meat from ungulates (bison, elk, deer, and moose), whitebark pine seeds, army cutworm moths, and cutthroat trout — may be more important than other food sources due to their high-caloric value. See FWS_LIT:019231; FWS_LIT:016075; FWS_LIT:016333.

The U.S. Fish & Wildlife Service’s Listing and Protection of Grizzly Bears in the United States

4. *Prior to European settlement, approximately 50,000 grizzly bears inhabited the western half of the lower 48 states. FWS_Rel_Docs:1441. By the 1930s, the range and numbers of grizzly bears were reduced to less than two percent of their former range. Id. By the 1950s, grizzlies were largely confined to areas in and surrounding Glacier and Yellowstone National Parks. Id.*

Response: Undisputed. Note also that the dramatic declines in grizzly bear population numbers and range throughout the 1900s were caused by government-funded bounty programs and European settlement, which resulted in grizzlies being shot, poisoned, and trapped wherever they were found.

FWS_Rel_Docs:001441. By the 1930s, grizzly bears had lost approximately 98 percent of their historic range in the western United States. *Id.* By the early 1970s, only a few hundred grizzly bears remained in the contiguous United States in a few isolated locations. *Id.*

5. *The population suffered additional mortalities in the 1970s when Yellowstone National Park's garbage dumps were closed. FWS_Rel_Docs:1441. These increased mortalities and a broader concern about the grizzlies' status led the U.S. Fish and Wildlife Service (FWS) to list grizzly bears in the lower 48 states as a threatened species. 1975 Rule, 40 Fed. Reg. 31,734 (July 28, 1975).*

Response: Undisputed. Note that the administrative record citation for the 1975 Rule is: FWS_LIT:018564.

6. *When listed, the Greater Yellowstone Ecosystem population estimate ranges from 136 to 312 bears, FWS_Rel_Docs:1441, and habitat distribution and modification were factors threatening the species, id.:1453; see also FWS_LIT:2483; FWS_LIT:2619; FWS_LIT:7533.*

Response: Undisputed. For clarification, note that the 136 to 312 bear population estimate is only a best-guess based on minimum population size. FWS_Rel_Docs:001441. Accurate population estimates (actual and trend) for grizzly bears are difficult to obtain. FWS_Rel_Docs:001439; FWS_LIT:014333; FWS_LIT:014559–60; FWS_LIT:003217. For grizzly bears, it takes at least six years’ worth of monitoring data and as many as 30 females with radio-collars to accurately estimate average annual population growth. FWS_Rel_Docs:001439.

7. *After listing the grizzly bear as a threatened species in 1975, FWS issued a special rule applying the ESA’s “take” prohibition to the bears, subject to certain exceptions. See, e.g., 40 Fed. Reg. 31,734. As framed prior to delisting, the exceptions were for: (1) self-defense or defense of others; (2) removal of nuisance*

bears, i.e., those that constitute a demonstrable threat to human safety or are committing “significant depredations to lawfully present livestock, crops, or beehives;” and (3) scientific research activities not resulting in death or permanent injury. 50 C.F.R. § 17.40(b)(1)(i)(B)-(D). These regulations applied to grizzly bears in the lower 48 states, including those in the Greater Yellowstone Ecosystem. Id.

Response: Partially disputed. For clarification, the source cited should read as follows: “... (3) scientific research activities not resulting in death or permanent *injury*” (emphasis added). Further, while Federal Defendants purport to characterize the exceptions to the ESA’s “take” prohibition for grizzly bears, they omit that, under the ESA regime, most conflict bears could be killed only if “[i]t has not been reasonably possible to eliminate such threat or depredation by live-capturing and releasing unharmed in a remote area the grizzly bear involved.” 50 C.F.R. § 17.40(b)(1)(i)(C).

FWS' Recovery Planning for Grizzly Bears in the United States

8. *With ESA protections and special regulations in place, FWS began recovery planning for grizzly bears under Section 4(f) of the ESA, 16 U.S.C. § 1533(f). FWS' 1982 Recovery Plan identified six recovery ecosystems in the lower 48 states thought to support self-perpetuating or remnant grizzly bear populations. FWS_Rel_Docs:1441; FWS_LIT:14322 (1982 Recovery Plan).*

Response: Undisputed. Note also that the 1982 Recovery Plan stated that FWS would need to “[e]stablish recovery of at least three populations in three distinct grizzly bear ecosystems in order to delist the species in the conterminous 48 states.”

FWS_LIT:014330. The 1982 Recovery Plan goes on to state that “[n]o one would recommend a single population in a single ecosystem as being adequate to provide a reasonable margin of safety . . . against systematic pressures and stochastic perturbations,” and that the “conservation and recovery of three populations, as opposed to only one or two populations, is believed necessary to assure perpetuation of the species to a point that no longer requires protection of the ESA.” FWS_LIT:014331.

9. *In revising the Recovery Plan in 1993, FWS explained that the recovery objective is to delist “each of the remaining populations by population as they achieve the recovery targets,” FWS_LIT:14533, and the recovery effort is to focus on “establishing viable populations in the six to seven areas ... where the grizzly was known to or believed to exist when it was listed in 1975,” id.:14540; see also id.: 14558 (“Grizzly bear populations may be listed, recovered, and delisted separately”).*

Response: Undisputed as to the content of the quoted material. Note also that the 1993 Recovery Plan considered a seventh recovery ecosystem in the San Juan Mountains in Colorado. FWS_LIT:014551–52.

10. *The 1993 Recovery Plan also addressed the “[t]wo separate requirements [that] must be met before the population within an ecosystem can be delisted ... (1) attainment of the population demographic parameters for that ecosystem within the monitoring period specified; and (2) ... development and completion of an interagency conservation strategy that will ensure*

that adequate regulatory mechanisms will continue to be present after delisting,” FWS_LIT:14557.

Response: Undisputed.

11. FWS consistently implemented the 1993 Recovery Plan’s direction, focusing listing and recovery efforts separately on each ecosystem. FWS_Rel_Docs:1450.

Response: Partially disputed. Federal Defendants’ allegation that the FWS has “*consistently* implemented the 1993 Recovery Plan’s direction” for “*each* ecosystem” is argumentative, and Plaintiffs respond to this point in their briefs (emphasis added). For example, the FWS has stalled its recovery efforts in the Bitterroot Ecosystem. *See e.g.*, FWS_LIT:018534 (proposing rule to remove earlier rule establishing non-essential experimental population of grizzly bears in the Selway-Bitterroot region but never finalizing the rule); FWS_Rel_Docs:001442 (acknowledging grizzly bears have not been reintroduced into the Selway-Bitterroot); FWS_Del_Doc:52618 (noting that “reintroductions [to the Selway-Bitterroot have] never occurred and the area remains unoccupied.”). Additionally, the FWS has

stalled its efforts to recover grizzly bears in the Selkirk and Cabinet-Yaak Ecosystems. *See e.g.*, FWS_LIT:019075 (acknowledging that reclassifying these populations as endangered is warranted but precluded).

12. *In the early 1990s, for example, FWS began considering and responding to petitions to revise the status of the grizzly bears in specific ecosystems, such as the North Cascades, Cabinet-Yaak, and Selkirk ecosystems. 55 Fed. Reg. 32,103 (Aug. 7, 1990); 58 Fed. Reg. 8250 (Feb. 12, 1993). FWS has continued to independently address the ESA status of bears in each ecosystem. See, e.g., 79 Fed. Reg. 72,450, 72,488 (Dec. 5, 2014)(discussing history of responding to listing petitions and making determinations for the Cabinet-Yaak Ecosystem).*

Response: Undisputed. However, for clarification, as noted in Plaintiffs' response to paragraph 11, the FWS has stalled in implementing its recovery efforts for *each* recovery ecosystem, such as the Bitterroot Ecosystem and the Selkirk and Cabinet-Yaak Ecosystems. *See* response to ¶11.

13. *FWS also has separately addressed recovery in each ecosystem, including issuing ecosystem-specific recovery plan supplements. See FWS_LIT:14705 (1996 Supplement: Bitterroot); FWS_LIT:14733 (1997 Supplement: North Cascades); FWS_LIT:15486 (2007 Supplement: Greater Yellowstone); FWS_LIT:15521 (2007 Supplement: Greater Yellowstone); FWS_LIT:16422 (2017 Supplement: Greater Yellowstone); 82 Fed. Reg. 58,444 (Dec. 12, 2017)(draft supplement; Northern Continental Divide).*

Response: Undisputed. However, for clarification, the Service has yet to draft ecosystem-specific recovery plan supplements for the Selkirk and Cabinet-Yaak Ecosystems. *See e.g., FWS_LIT:016084–85 (2011 status review noting that the FWS remains “in the process of updating the 1993 Recovery Plan” for the Cabinet-Yaak and Selkirk Ecosystems “as there are new science and techniques available”).*

FWS' Recovery Planning for the Greater Yellowstone Ecosystem Segment

14. *The Greater Yellowstone Ecosystem is one of the original areas FWS identified for recovery planning and delisting, FWS_LIT:14552, and it “refers to the larger ecological system containing and surrounding Yellowstone National Park,” FWS_Rel_Docs:1436.*

Response: Undisputed.

15. *Within the Greater Yellowstone Ecosystem is the 9,500 mi² “recovery zone” surrounding Yellowstone National Park that FWS identified in the 1993 recovery plan and then set forth recovery objectives and actions focusing on recovering bears within this recovery zone. FWS_LIT:14552, 14579-14597.*

Response: Undisputed. However, for clarification, the 2017 final rule also refers to the “recovery zone” outlined in the 1993 Recovery Plan as the “Primary Conservation Area.”
FWS_Rel_Docs:001436.

16. *FWS' recovery plans provided for the cooperation among Federal, State, Tribal, and other entities to study, monitor, protect, and recover grizzly bears in the Greater*

Yellowstone Ecosystem. FWS_Rel_Docs:1441-49 (Recovery Planning and Implementation); id.: 1484. Several interagency expert groups exist that contribute to this function. Id.

Response: Undisputed.

17. *The Interagency Grizzly Bear Study Team was created in 1973 and is comprised of scientists and managers from FWS, the U.S. Geological Survey, the National Park Service, the U.S. Forest Service, academia, and state wildlife agencies. FWS_Rel_Docs:1441. This Team provides scientific information for the Greater Yellowstone Ecosystem population, which has resulted in this population being one of the most studied grizzly bear populations in the world. Id.*

Response: Undisputed.

18. *The Interagency Study Team's efforts are supplemented by the Interagency Grizzly Bear Committee, a group of Federal and State land managers that "coordinate management efforts and research actions across multiple Federal lands and States to recover the grizzly bear in the lower 48 States." FWS_Rel_Docs:1441.*

Response: Undisputed.

19. *A third group — the Yellowstone Ecosystem Subcommittee — is comprised of Federal, State, local, and Tribal representatives and coordinates recovery efforts specifically for the Greater Yellowstone Ecosystem population. FWS_Rel_Docs:1441.¹*

Response: Undisputed.

20. *The interagency groups' work has led to a coordinated and unified approach to evaluating recovery and managing the grizzly bears in the Greater Yellowstone Ecosystem.*

¹ *With delisting, the subcommittee's functions have been transferred to the Yellowstone Grizzly Bear Coordinating Committee, a collection of State, Federal, Tribal, and local agencies charged with implementing the 2016 Conservation Strategy. FWS_Rel_Docs:1565.*

Response: Undisputed. However, for clarification, note that the FWS' role on the Yellowstone Grizzly Bear Coordinating Committee is advisory only (i.e., FWS is a non-voting member). See FWS_Emails:000523–24 (draft charter outlining who are the voting members of the committee and stating that the FWS grizzly bear coordinator, as well FWS field office supervisors from Montana, Idaho, and Wyoming will serve as ex-officio members of the committee only); see also Yellowstone Grizzly Coordinating Committee, http://igbconline.org/wp-content/uploads/2018/03/180322_YGCC-charter-finaldocx.pdf (last visited July 30, 2018) (final charter as adopted in December 2017).

FWS_Rel_Docs:1484. The data and information generated by the interagency groups and others informed FWS' development of habitat and demographic recovery criteria for the Greater Yellowstone Ecosystem population. FWS_Rel_Docs:1442.

Response: Undisputed.

21. FWS initially developed recovery criteria in the 1993 Recovery Plan (FWS_LIT:14580-14597), and FWS revised the criteria in 2007 Supplements to the Recovery Plan (FWS_LIT:15486; FWS_LIT:15521). FWS further updated the demographic recovery criteria in a 2017 Supplement to the Recovery Plan (FWS_LIT:16422).

Response: Undisputed. For clarification, the FWS is referring to revised recovery criteria for the Greater Yellowstone Ecosystem population of grizzly bears only. FWS_LIT:016422.

FWS' Habitat Recovery Criteria

22. The habitat-based recovery criteria are centered on studies and modeling establishing that the protection and management of secure grizzly bear habitat "is one of the most effective management actions to ensure population persistence."

FWS_Rel_Docs:1441; see generally FWS_LIT:11531 (Schwartz et al. 2010); FWS_LIT:9992 (Nielsen et al 2006).

Response: Undisputed.

23. *The habitat criteria establish objective, measurable values for levels of motorized access, secure habitat, developed sites, and livestock allotments that are compatible with a stable-to-increasing grizzly bear population. FWS_LIT:15521 (2007 Supplement: Habitat Criteria). These criteria apply in the 9,500 mi² “recovery zone” established in the 1993 Recovery Plan and are based on baseline habitat conditions that existed in 1998 (“1998 baseline”). FWS_LIT:15522; FWS_Rel_Docs:1442.*

Response: Undisputed. For clarification, note that the “developed sites” habitat standards remain subject to further revision, potentially as soon as this year (2018). See FWS_Emails:000122 (describing concerns with 2016 Conservation Strategy “developed sites” definition, standards, and application rules and stating that a “multi-agency planning group will be established to complete a reevaluation of ‘developed site’

definition, standards and application rules on or before the end of 2018.”); FWS_LIT:017039–40.

24. *FWS selected the 1998 baseline conditions because they corresponded with a grizzly population increasing at a rate of 4-7% annually per year, FWS_LIT:15522, and because secure habitat and developed sites within the Greater Yellowstone Ecosystem changed little from 1988 to 1998, FWS_LIT:12803. “The main assumption is that the levels of habitat security and other habitat conditions in 1998 provided the base environment that led to this ongoing growth of the bear population.” FWS_LIT:12803.*

Response: Undisputed. For clarification, note that FWS did not have an accurate measurement of the footprint of developed sites upon which to base its 1998 baseline at the time the rule was being developed though. FWS_Emails_017062 (Forest Service employee telling FWS employee that “we do not have footprints” of developed sites and that “[t]his has always been a conundrum with developed sites – they have always been represented as a mere point. It may be a simple patrol cabin in the back country, or a major developed site (which may include multiple buildings) –

they are all portrayed as points ... I believe the entire concept of developed sites need to be revisited for the next review of the [Conservation Strategy].”).

25. *FWS found that maintaining and improving the 1998 baseline conditions will, combined with the demographic criteria, ensure a viable Greater Yellowstone Ecosystem population into the foreseeable future. FWS_Rel_Docs:1442-43; FWS_LIT:15522*

Response: Disputed as to the allegation that a viable population will be ensured into the foreseeable future. The best available science indicates that an isolated population of only 600-700 grizzly bears is not viable in the long-term. *See e.g.*, FWS_LIT:30547 (Traill (2009)); FWS_LIT:030554 (Traill (2007)); FWS_LIT:028618 (Reed (2003)); and FWS_LIT:003588 (Frankham (2013)) (all agreeing that a population of thousands (not hundreds) of grizzly bears is required to ensure the species’ long-term viability). *See also* ECF_186:34–39 (Plaintiffs’ summary judgment brief detailing, with record citations, the best available science relating to long-term population viability). Further, note that FWS

omits that the final 2016 Conservation Strategy abandoned assured maintenance of the 1998 baseline conditions and instead announced that an interagency planning group will soon propose unspecified “revisions to the 1998 habitat standards” based on an asserted need for, among other things, “more administrative infrastructure.” FWS_LIT:017039–40.

26. *Starting in the early 1980s, the Interagency Committee began work to address the land-use threats that contributed to the bears’ listing in 1975. FWS_Rel_Docs:1453. The Committee worked with the National Parks and National Forests in the Greater Yellowstone Ecosystem to change and improve land management practices. Id.*

Response: Undisputed.

27. *The National Park Service and Forest Service are collectively responsible for 98% of land within the primary recovery zone and 88% of bear’s suitable habitat, id.:1460, and they responded to the Committee’s work by incorporating grizzly bear land-use protections into their Superintendents’ Compendia and National Forest land management plans, id.:1453; see, e.g.,*

FWS_LIT:12620 (Interagency Grizzly Bear Guidelines, where the resource management agencies explained that the “management guidelines will serve as the basis for our aggressive pursuit of the objectives of conserving grizzly bears and their habitat and of providing balanced resource uses to meet the overall management goal of providing a sustained flow of all wildland resources”).

Response: Undisputed. However, the Forest Service defers to state regulations regarding hunting on National Forest lands.² Additionally, the Forest Service has indicated that some updates to National Forest land management plans remain necessary to ensure full compliance with the habitat standards included in the 2016 Conservation Strategy. FWS_Rel_Docs:001630 (“We have

² For instance, Bighorn National Forest states: “Hunting is allowed on National Forest lands. There are many hunting opportunities in the Bighorn National Forest . . . Wildlife licensing, regulations, harvest limits, and seasons are set by the Wyoming Game and Fish Department.” Forest Service, Hunting, https://www.fs.usda.gov/wps/portal/fsinternet/cs/detail!/ut/p/z0/04_Sj9CPykssy0xPLMnMz0vMAfljo8zjjQwgnNHCwN_DI8zPyBcqYKBfkO2oCABZcx5g/?position=Not%20Yet%20Determined.Html&pn_ame=Forest%20Service%20-%20Hunting&ss=110202&navtype=&pnavid=&navid=1100000000000000&ttype=detail&cid=stelprdb5167306 (last visited Aug. 7, 2018).

concluded forest plan direction meets the intent of, or is more protective than, the updated 2016 Strategy in all but one minor instance. The Caribou-Targhee Forest Plan secure habitat baseline for the Henry's Lake #2 Bear Management Unit needs updating per the improvements made in the Gallatin National Forest travel management decision as incorporated in the 2016 Strategy ... [And,] [w]here we found other minor differences in application rule text or monitoring requirements, we've indicated a need to update plans through administrative change, amendment, or revision as soon as practicable."). *See also* FWS_Rel_Docs:001646–001655 (chart outlining necessary changes). Additionally, note that the Forest Service has yet to “evaluate whether the species should be identified as a Regional Forester Sensitive Species or Species of Conservation Concern.” FWS_Rel_Docs:001630. Finally, for clarification, in the first sentence of the allegation we assume that the FWS meant to refer to the “Primary Conservation Area” (instead of as the “primary recovery zone”), which is how the 1993 Recovery Plan’s “recovery zone” is referenced in the 2017 final rule.

28. *The Federal land management agencies continued to maintain or improve these habitat conditions; as provided in FWS' recovery plan, the agencies incorporated the 1998 baseline conditions as standards within the governing land-use and management plans. FWS_LIT:17961 (Yellowstone National Park Compendium, 2014); FWS_LIT:4364 (Grand Teton National Park and John D. Rockefeller, Jr. Memorial Parkway Compendium, 2016); FWS_LIT:13092 (2006 Forest Plan Amendment for Grizzly Bears).*

Response: Undisputed, but for clarification, only the Beaverhead-Deerlodge (2009), the Shoshone (2015), and the Gallatin (2015) National Forests have incorporated the habitat direction of the 2007 Conservation Strategy into their forest plans through revision (Beaverhead-Deerlodge, Shoshone) or amendment (Gallatin), while the Custer, Bridger-Teton, and Caribou-Targhee National Forests rely upon the 2006 Record of Decision for plan amendments incorporating the 2007 Conservation Strategy habitat standards. FWS_Rel_Docs:001629. None of the National Forests have directly adopted, revised, or

amended their forest plans to incorporate the final text of the 2016 Conservation Strategy, and some changes remain necessary.

FWS_Rel_Docs:001629, 001646–001655.

29. *These land-use protections were accompanied with improved land-management practices in the primary recovery area that addressed: motorized access and management, FWS_Rel_Docs:1454; developed sites, id.:1454-55; livestock allotments, id.:1455; mineral and energy development, id.:1455-56; recreation (including snowmobile use), id.:1456-57; and vegetation management, id.:1457.*

Response: Undisputed, but for clarification the land-management practices referenced apply only in the Primary Conservation Area (as opposed to the “primary recovery area”).
FWS_Rel_Docs:001454.

30. *The habitat protections and improved management led to substantial improvements to grizzly bear habitat and, in turn, the grizzly bear population. FWS_Rel_Docs:1442-1445. By the early 2000s, grizzly bears occupied 68% of the Greater Yellowstone Ecosystem’s suitable habitat and were growing at a*

rate of 4-7% per year. Id.:1444. By 2017, the population continued to grow in size and occupy 16,286 mi² of habitat, or 92% of the suitable grizzly bear habitat in Greater Yellowstone Ecosystem. Id.

Response: Partially disputed as to the allegation that “[b]y 2017, the population continued to grow in size.” First, the final rule’s analysis of population trends abruptly ends at 2015 and is not current through 2017 data in spite of its June 2017 publication date. *See e.g.*, FWS_Emails:000729 (“We do not need information from 2016 for the current rule.”); FWS_Rel_Docs:001447 (Table 1, applying Demographic Criterion 2 only through 2015). In fact, the population did not continue to grow in size from 2014-2016, rather, grizzly bears in the Greater Yellowstone Ecosystem experienced high mortality levels and a decrease in the population’s size during this time. *See* FWS_LIT:023254 (2015 annual report documenting an estimated population size of 717 in 2015); FWS_LIT:023582 (2016 annual report documenting an estimated population size of 695 in 2016); FWS_Emails:058290 (“The 2015 Yellowstone population point estimate inside the [Demographic Monitoring Area] has declined from 2014 to 2015:

[from 757 in 2014 to 714 in 2015]”); FWS_Emails:000004 (“Almost all simulations – 93% – show population decline. Conversely, only 7% show increase. The overwhelming weight-of-evidence supports concluding that the population declined from 2014 to 2016.”). *See also*; U.S. Geological Survey, 2017 Known and Probable Grizzly Bear Mortalities in the Great Yellowstone Ecosystem, <https://www.usgs.gov/data-tools/2017-known-and-probable-grizzly-bear-mortalities-greater-yellowstone-ecosystem> (last visited July 30, 2018)(documenting 56 dead grizzly bears in 2017); FWS_LIT:023609 (documenting 58 dead grizzly bears in 2016); FWS_LIT:023255 (documenting 61 dead grizzly bears in 2015). Additionally, the allegation that the population is growing is inaccurate. *See* FWS_Emails:015154 (Interagency Study Team member noting that the best way to describe the population trend is as “stationary,” or as a “relatively flat population trajectory” or a “relatively constant population size”). Further, although FWS states that “[b]y the early 2000s, grizzly bears . . . were growing at a rate of 4-7% per year,” the final rule asserts that there was no meaningful population growth between 2002 and 2014.

FWS_Rel_Docs:001558 (“The population trajectory that includes the most recent data . . . indicates no statistical trend (*i.e.*, relatively flat population trend) within the [Demographic Monitoring Area] for the period 2002 to 2014”).

31. *When FWS issued the 2017 Rule, the science-based habitat recovery criteria had been met since 2007.*

FWS_Rel_Docs:1443.

Response: Undisputed. For clarification, the habitat recovery criteria being referenced apply to the Greater Yellowstone Ecosystem population only. FWS_Rel_Docs:001443

FWS’ Demographic Recovery Criteria

32. *FWS also developed and revised the demographic criteria for the Greater Yellowstone Ecosystem population.*

FWS_LIT:16422 (2017 Recovery Plan Supplement). The demographic criteria relate to all of the factors that influence grizzly bear survival and reproduction and the population’s trend, FWS_Rel_Docs:1439, and they apply to the area where unique adult female grizzly bears with cubs-of-the-year are monitored and

where the population size is estimated — the Demographic Monitoring Area. Id.:1447

Response: Undisputed.

33. *The Demographic Monitoring Area is based on the Interagency Study Team’s recommendations and represents the area important to the long-term conservation of the population. FWS_Rel_Docs:1447; FWS_LIT:23373-74 (explaining that the Yellowstone Ecosystem Subcommittee and Interagency Study Team approved counting females with cubs of the year within a revised Demographic Monitoring Area (Fig. 6)).*

Response: Undisputed. However, for clarification, the Demographic Monitoring Area was reduced in size from the 2007 rule to allow “zero net growth,” instead of allowing “the population to be at least stable and to increase 95% of the time.” See FWS_Emails:061617 (comparing 2007 delisting rule to 2015 proposed delisting rule: in 2007, the Demographic Monitoring Area consisted of 36,776 sq. mi., while in 2015, the Demographic Monitoring Area was reduced to only 19,279 sq. mi. (a reduction

by 17,497 sq. mi.)). *See also* FWS_Del_Em:00000145743–44 (map indicating old (2007) and new (2016) monitoring area boundaries).

34. *The Demographic Monitoring Area is 19,279 mi² and includes 100% of the grizzly bears suitable habitat in the Greater Yellowstone Ecosystem (17,774 mi²). FWS_Rel_Docs:1444, 1447. It also includes areas where mortalities can disproportionately influence population vital rates and dynamics – narrow strips at the periphery of suitable habitat that act as population sinks. Id.:1447.*

Response: Partially disputed. For clarification, 28 percent of current grizzly bear occupancy within the Greater Yellowstone Ecosystem occurs in areas that Federal Defendants do not consider “suitable habitat.” FWS_Rel_Docs:01484. Furthermore, Federal Defendants’ allegation that the Demographic Monitoring Area contains *all* (“100%”) of the suitable habitat available to Greater Yellowstone Ecosystem grizzly bears is argumentative, and Plaintiffs respond to this point in their briefs. First, as noted in Plaintiffs’ response to paragraph 33, FWS shrunk the size of the Demographic Monitoring Area (which is the area where

mortalities are counted) from 95,225 sq. km. to 49,431 sq. km. at the states' request. FWS_Del_Em:00122644 (“What we have given the states: 1. Reduced the area where mortalities are counted against the mortality limit . . . thereby allowing states to decide how they manage mortality for bears without any limits outside the [Demographic Monitoring Area]”);

FWS_Del_Em:00000145743–44 (map indicating old (2007) and new (2016) monitoring area boundaries); FWS_Rel_Docs:000200 (Peer Reviewer noting: “The new proposed monitoring area is substantially smaller than that adopted in 2007, and excludes substantial areas of suitable habitat in Wyoming and Montana.”).

Second, the Demographic Monitoring Area does not include protections for essential connectivity corridors — which are critical to ensuring the species' long-term viability and recovery — because of state desires rather than science-based support for what constitutes “suitable” habitat. *See e.g.*

FWS_Del_Em:00122644 (outlining FWS deference to state desires and stating: “What we requested of the states: 1. Do not place discretionary hunting mortality in the linkage area between

[Northern Continental Divide Ecosystem] and Yellowstone. What we got for an answer: Montana refused to commit to this.”);

FWS_Del_Em:00151751 (FWS stating: “What we need for delisting to be proposed in Yellowstone: 1. Commitment from Montana not to hunt in the zone between Yellowstone and the [Northern Continental Divide Ecosystem] (Highlands, Tobacco Roots, and East of Deerlodge (Nevada Mountains and Boulder Mountains)”); FWS_Del_Em:00153335 (acknowledging FWS “is in discussions with the states of Montana and Idaho about not allowing grizzly hunting in important connector areas between the Yellowstone and populations to the north.”);

FWS_Del_Em:00144562 (FWS official stating: “Connectivity is an accepted conservation effort for all species. What we are asking for is management efforts to facilitate connectivity . . . The state[s] refuse[] to do anything for connectivity, thereby nullifying [other agency] efforts . . . What we are asking the state[s] to do will cost them nothing since there are few if any bears in these areas most of the time to hunt anyway. This is [a] MAJOR issue. The objection to doing this is driven by extreme ideology.”);

FWS_Emails:059449 (FWS official stating: “It is our hope to maximize the opportunity for occasional male movement between the [Northern Continental Divide Ecosystem] and Yellowstone to address concerns about negative long-term isolation impacts to Yellowstone. One way to achieve this objective, is to minimize discretionary mortality in the genetic connector area in Montana between the [Northern Continental Divide Ecosystem] and Yellowstone through the Madison Range, Tobacco Roots, Highland Mountains, Boulder Mountains and Nevada Mountains. This could be accomplished by not permitting sport hunting in these connector areas . . . A commitment to connectivity management in state regulations or in Commission policy statement would make this clear and legally defensible.”); *see also*

FWS_Del_Em:00144669 (states stating: “[A]ny declaration of ‘no hunting zones’ as part of the federal delisting rule is unacceptable.”); FWS_Del_Em:00122644 (documenting Montana’s refusal to not place discretionary hunting mortality in the linkage area between the [Northern Continental Divide Ecosystem] and Yellowstone); FWS_Emails:00917 (noting state comments on the

proposed rule (“The state agencies requested that the final rule more explicitly state that ‘genetic connectivity is not required for delisting, and that the genetic health of the [Yellowstone grizzly segment] is very strong”) and Interagency Study Team member’s response (while connectivity may not be required for delisting “according to the recovery criteria . . . from a scientific view, it would be desirable,” and “[i]t is an overreach to state that the genetic health is ‘very strong;’ [Greater Yellowstone Ecosystem] remains an isolated population with lower genetic diversity than many other grizzly bear populations”)).

35. *Experts determined that the Demographic Monitoring Area (and the extent of suitable habitat within it) is sufficient to meet all habitat needs of a recovered population; it provides “ecological resiliency to the population through the availability of widely distributed, high-quality habitat that will allow the population to respond to environmental changes.”*

FWS_Rel_Docs:1444.

Response: Partially disputed. Federal Defendants’ allegation that the Demographic Monitoring Area “is sufficient to

meet *all* habitat needs” of a recovered grizzly bear population is argumentative, and Plaintiffs respond to this point in their briefs (emphasis added). See response to ¶34.

36. *Due to land-ownership patterns, lack of food resources, high potential for conflict, and other factors, areas outside the Demographic Monitoring Area largely do not contain suitable habitat and are not suitable for sustaining grizzly bear occupancy. FWS_Rel_Docs:1410. Bears in these peripheral areas likely will always rely on the grizzly bear population inside the Demographic Mentoring Area as a source population. Id.:1410-11.*

Response: Partially disputed. First, the second sentence should read: “Bears in these peripheral areas likely will always rely on the grizzly bear population inside the Demographic *Monitoring* Area as a source population” (emphasis added). Second, Federal Defendants’ allegation that areas outside the Demographic Monitoring Area do not contain “suitable habitat” is argumentative, and Plaintiffs respond to this point in their briefs. See response to ¶ 34.

37. *Within the Demographic Monitoring Area, FWS identified three demographic criteria to objectively measure and monitor recovery: (1) minimum population size; (2) reproductive female distribution; and (3) annual human-caused mortality limits required to achieve and sustain recovery. FWS_Rel_Docs:1445.*

Response: Undisputed.

38. *Criteria 1 requires a minimum population of 500 bears, with at least 48 females with cubs-of-the-year, in the Demographic Monitoring Area. FWS_Rel_Docs:1447. Criteria 1 is not a population goal or target, but a minimum population number; a grizzly population in the Demographic Monitoring Area exceeding this criteria will ensure the short-term genetic health of the Greater Yellowstone Ecosystem population. FWS_Rel_Docs:1446-47; FWS_LIT:9423 (Miller & Watts 2003) (“[I]t is unlikely that genetic factors will have a substantial effect on the variability of the Yellowstone grizzly over the next several decades;” thus, the focus is on maintaining the population at or above its current population size).*

Response: Partially disputed. First, some states and/or agencies *are* interpreting the 500 number as a minimum population target or goal — as the former FWS grizzly bear recovery coordinator stated: Although “the 500 number is based on genetics and it was never a demographic floor number or a population target ... [s]ome agencies have seized this minimum number necessary for minimal loss of genetic diversity as a population goal. This will be a problem into the future. This is an unfortunate minimalist approach to conservation (i.e. what is the lowest number we need?).” FWS_Emails:059385. Second, during the Peer Review process, reviewers raised concerns with the 500 minimum population size, stating that there is “no scientific basis for the [proposed rule’s] lower limit of 500 bears.”

FWS_Rel_Docs:005200; FWS_Rel_Docs:005202 (“[T]he lower population target of 500 cannot be defended based on science”);

FWS_Rel_Docs:005211 (“To manage populations at pre-determined numeric values (or ranges of values) can be inherently problematic”). Finally, Miller and Waits (2003) concluded that an effective (not total or census) population size of at least 500 to

5,000 individuals is generally required to maintain *long-term* evolutionary potential and noted that the Yellowstone grizzly segment “is unlikely” to ever reach that number.

FWS_LIT:009423. Miller and Waits (2003) noted concerns that the “genetic consequences of inbreeding and isolation are likely to transpire for longer periods (decades and centuries)” which is within the recommended timeframe for evaluating extinction risk.

FWS_LIT:009423. Miller and Waits (2003) also raised concerns about threats to the Yellowstone grizzly segment from lack of connectivity, loss of habitat, and high levels of human-caused mortality. FWS_LIT:009423.

39. *Criteria 2 requires that 16 of 18 Bear Management Units³ in the Greater Yellowstone Ecosystem be occupied with*

³ *The National park Service and the National Forests identified 18 bear management units within the Greater Yellowstone Ecosystem to aid in managing and monitoring the population; these units approximate the lifetime home range of a female grizzly bear and provide enough suitable habitat to ensure bears are well distributed across the Greater Yellowstone Ecosystem. FWS_Rel_Docs:1442.*

Response: Undisputed.

females and young, with no two adjacent units being unoccupied, during a six-year sum of observations. FWS_Rel_Docs:1447.

Response: Undisputed.

40. *Independent females are the most influential factor affecting grizzly bear vital rates and trends, id.:1446, and this criteria ensures that reproductive females occupy a majority of the recovery zone and are not concentrated in one portion. Id.:1447. Grizzly bears have met the first two recovery criteria since 2003 and 2001, respectively. FWS_Rel_Docs:1447.*

Response: Undisputed. For clarification, only grizzly bears in the Greater Yellowstone Ecosystem population have met the referenced recovery criteria. FWS_Rel_Docs:001447.

41. *Criteria 3 requires the maintenance of a grizzly bear population around the modeled-average Chao2 population estimate for 2002-2014 (an average of 674 bears, with a 95% confidence interval of 600-747 bears). FWS_Rel_Docs:1447. The criteria also includes science-based mortality limits for independent females, independent males, and dependent young*

that govern and ensure the population remains within the modeled-average population range. Id.

Response: Undisputed as to the content of Criteria 3.

However, Federal Defendants assert that the mortality thresholds will “ensure” that the grizzly bear population will “remain[] within the modeled-average population range,” but the mortality thresholds do not limit the number of bears that may be killed due to conflicts with human activities and thus do not protect the population from decline due to an escalation in conflict mortality.

See FWS_Rel_Docs:002328. As the 2016 Conservation Strategy explains, “[a]ny mortality threshold will not affect the . . . management of conflict grizzly bears” and “[s]tate [grizzly bear management] plans provide for the take of conflict bears regardless of the current mortality quota upon consultation with all involved agencies.” *Id.* Further, note that the International Association for Bear Research and Management — which an Interagency Study Team member admits constitutes a valued, “purely scientific and independent review” of FWS’ scientific interpretations, FWS_Emails:033875 — stated that “700 bears in

an isolated region is not a large population” and “setting a goal of maintaining a population at a certain numerical size (674 individuals) is not only impractical, but seems counter to other stated conservation strategies of allowing the population to fill all suitable habitat and even expand to connect to the [Northern Continental Divide Ecosystem] and possibly the Bitterroots, the latter of which is a significant and important component of protecting grizzly bears as a species.” FWS_Pub_Cmt:003920. The American Society of Mammalogists and the Society for Conservation Biology, and sixty-four scientific experts are also in agreement that an isolated population of 600-700 grizzlies in the Yellowstone region is not a “recovered” population on which the FWS can scientifically base this demographic criterion. FWS_Pub_Cmt:004191–93; FWS_Pub_Cmt:006108.

42. *“If mortality limits are exceeded for any sex/age class for three consecutive years and any annual population estimate falls below 612 (the lower bound of the 90% confidence interval), the [Interagency Study Team] will produce a Biology and Monitoring Review to inform the appropriate management*

response. If any annual population estimate falls below 600 (the lower bound of the 95% confidence interval), this criterion will not be met and there will be no discretionary mortality, except as necessary for human safety.” FWS_LIT:16426.

Response: Undisputed as to the content of the criterion.

However, note that there is concern that the population monitoring techniques in place may fail to detect a decline in the population in an adequate timeframe to allow for meaningful management response (otherwise known as a “lag effect”). See FWS_Emails:033884 (International Association for Bear Research and Management explaining: “[T]he Chao2 estimator becomes increasingly negatively-biased with increasing density. As such, Chao2 estimates could level off while the population continues to increase, giving a false sense of the population reaching carrying capacity (K). Likewise, once the population has exceeded the density threshold of [females with cubs of the year (FCOY)] that precludes further differentiation of distinct individuals, a decline also would not be detectable until dropping below this threshold.”); see also FWS_Emails:025870 (FWS officials

questioning whether additional modeling of mortality rates is required to ensure adequate detection of rate of population decline in short, six-year time period); FWS_Emails:058288–89 (same; FWS official questioning: “What happens to the population trajectory and how quickly does it happen if the female mortality rates are exceeded: by a small amount, by a modest amount, by a large amount? If they are exceeding by those amounts in one year, or in successive years? Those types of simulations would give us an understanding of magnitude of risk to make the best policy decisions about necessary management responses/ regulatory mechanism as we go forward.”); FWS_Rel_Docs:005207 (Peer Reviewer noting that “[d]uring potentially high mortality years . . . management responses may be lagging and allow population to dip <600 before corrective actions are taken”).

43. *Criteria 3 involves the use of the Chao2 population estimator, which uses observations of females with cubs-of-the-year, rule sets, and statistical analyses to produce an annual population estimate within the Greater Yellowstone Ecosystem. FWS_Rel_Docs:1446.*

Response: Undisputed. However, for clarification regarding potential concerns with the Chao2 population estimator, see response to ¶ 42.

44. *With the Interagency Study Team’s evaluation of mortalities occurring in the prior year, Chao2 produces conservative population estimates and mortality limits that govern the State’s allocation of discretionary mortality in the primary conservation area. Id.; FWS_LIT:33124-29; see also FWS_LIT:11519-20; FWS_LIT:33137. While new models or methods may be developed, the Conservation Strategy provides that Chao2 will be used into the foreseeable future. Id.; FWS_LIT:17023.*

Response: Partially disputed. First, Plaintiffs disagree that FWS’s mortality limits are “conservative,” because they do not limit mortality due to conflicts with human activities. *See* FWS_Rel_Docs:002328 (2016 Conservation Strategy stating that mortality threshold will not affect management of “conflict” bears). Second, while Chao2 may be considered a “conservative” method of estimating population, meaning it produces relatively

low estimates compared to other methods, FWS_Pub_Cmt:006038, other common methodologies, such as the “Mark-Resight” method produce much larger population counts when applied to the same population. *See* FWS_Pub_Cmt:006038; FWS_Rel_Docs:003725; FWS_Emails:016838–39. However, no provision in the final 2016 Conservation Strategy requires these figures to be recalibrated if a new population estimate methodology is adopted. *See* FWS_Emails:008546–47; FWS_Emails:008555; FWS_Rel_Docs:002319; FWS_Rel_Docs:001699. This issue relating to the final 2016 Conservation Strategy’s lack of assurance for recalibration if a new population estimation method is adopted, was repeatedly raised as a concern by the FWS, National Park Service, Peer Reviewers, and public commenters, as well as members of the Interagency Study Team. *See e.g.*, FWS_Del_Doc:011341 (noting that the states’ changes to the draft Conservation Strategy regarding recalibration “says no matter what method is used to estimate population size, [the states] will manage down to 600 or so bears. This is completely unacceptable and will not pass peer review or the red face test. Chris [Servheen

(former FWS grizzly bear recovery coordinator)];”

FWS_Emails:016689 (noting FWS’ concern with states’

recalibration language and suggesting alternatives);

FWS_Emails:019305 (Interagency Study Team suggesting

language on recalibration and noting that “[d]etermining the

correlation or correction between the model-averaged Chao2 and

any new estimation method is critical to maintain the population

at the 2002-2014 average.”); FWS_Emails:025504 (National Park

Service official expressing concern with states’ recalibration

position: “We firmly believe that we would need to recalibrate the

minimum population threshold if a new method results in a new

higher population estimate.”). The FWS’ Director even expressed

his concern that the states refused to allow adequate recalibration

language to be included in the final 2016 Conservation Strategy.

FWS_Emails:008546 (former Director Ashe stating: “It is much

clearer, and frankly scientifically warranted, to just state clearly if

the population estimator is changed we will recalibrate. Why the

states are unwilling to make this commitment, frankly, is quite

concerning.”).

45. *Criteria 3 also is based on maintaining the Greater Yellowstone Ecosystem population around the average 2002 to 2014 population estimate, which corresponds to the period where the population continued to grow and then stabilize at or near the carrying capacity of the Greater Yellowstone Ecosystem.*⁴
FWS_Rel_Docs:1447-48; FWS_LIT:16430; FWS_LIT:33117; FWS_LIT:16502; FWS_LIT:893.

Response: Disputed as to Federal Defendants’ allegation that the population has reached the “carrying capacity” of the Greater Yellowstone Ecosystem. *See* FWS_Rel_Docs:005174 (Peer Reviewer stating that the evidence is “insufficient to assess population status relative to carrying capacity”);

⁴ *Carrying capacity is “the maximum number of individuals a particular environment can support over the long term without resulting in population declines caused by resource depletion.” FWS_Rel_Docs:1439; FWS_LIT:16523 (carrying capacity is the “maximum attainable size of a population”); FWS_LIT:6322 (carrying capacity is “the density at which the space being studied becomes ‘saturated’ with organisms”).*

Response: Undisputed as to the definition of “carrying capacity” provided. However, for clarification, it is arguable whether the grizzly bear population in the Greater Yellowstone Ecosystem has approached the “carrying capacity” of the region as the term is defined here. *See* response to ¶ 45.

FWS_Rel_Docs:005186 (Peer Reviewer criticizing FWS's conclusion that the grizzly bear population has reached carrying capacity); FWS_LIT:005772 (noting that the evidence only "possibly" indicates the population is near carrying capacity); FWS_LIT:005771 (FWS biologists acknowledging the "possibility that decline in the whitebark pine resource reduced carrying capacity" of the Greater Yellowstone area); FWS_Emails:033884 (International Association for Bear Research and Management commenting that the Chao2 estimator could give a "false sense of the population reaching carrying capacity (K)" and noting that the final rule and criterion 3's numerical management target to the 2002-2014 average population estimate is counter to the goal of population expansion and connectivity). Further, although FWS asserts that the population grew between 2002 and 2014, the final rule states that there was no meaningful population growth over that time period. FWS_Rel_Docs:001558 ("The population trajectory that includes the most recent data . . . indicates no statistical trend (*i.e.*, relatively flat population trend) within the

[Demographic Monitoring Area] for the period 2002 to 2014”); see also response to ¶ 30.

46. *Specifically, when listed in 1975, the population numbered as low as 136 animals. FWS_Rel_Docs:1441. With the habitat, mortality, and other protections in place, the grizzly bear population substantially grew and expanded its range; from 1983 to 2001, the annual population growth rate ranged from 4.2 to 7.6%, whereas the annual growth rate ranged from 0.3 to 2.2% from 2002 to 2011. FWS_Rel_Docs:1445-46;⁵ FWS_LIT:16502 (van Manen et al 2016); FWS_LIT:23360 (Interagency Study Team, 2012) (“Trend estimates using 2002-2011 vital rates suggest the population was stable to slightly increasing during the period.”).*

Response: Undisputed. For clarification, note that FWS did not use the most recent population data from 2015-2017 in the

⁵ *The range in annual growth rate (4-7%) reflects two different assumptions: (1) that bears with unknown fates died (a conservative, unrealistic assumption, given all bears with unknown fates do not die) and (2) the bears with unknown fates are removed from the sample. FWS_Rel_Docs:1445. The true rate lies within the range. Id.*

Response: Undisputed.

final rule. See FWS_Emails:018429 (“Adding 2015’s numbers would not necessary [sic] help our case.”); FWS_Emails:018441 (FWS official arguing against adding 2015 numbers because it would require updating the population data throughout all of the documents). Notably, the grizzly bear population dropped from approximately 757 in 2014, FWS_LIT:023465, to 717 in 2015, FWS_LIT:023254, and dropped again to only 695 bears in 2016, FWS_LIT:023582. Further, although FWS asserts that “the annual growth rate ranged from 0.3 to 2.2% from 2002 to 2011,” the final rule states that there was no meaningful population growth between 2002 and 2014. FWS_Rel_Docs:001558 (“The population trajectory that includes the most recent data . . . indicates no statistical trend (*i.e.*, relatively flat population trend) within the [Demographic Monitoring Area] for the period 2002 to 2014”); *see also* response to ¶ 30.

47. *The Interagency Study Team and others investigated the stabilizing growth rate trends during the 2000s, which led to numerous studies and data that “indicate that the growth rate of the ... [Demographic Monitoring Area] population*

has slowed as bear densities have approached carrying capacity, particularly in the core area of their current range.”

FWS_Rel_Docs:1446; see FWS_LIT:33117; FWS_LIT:893; FWS_LIT:16512 (van Manen et al. 2016) (study results of 30-year period (1983-2012) “suggest that this population is near or at carrying capacity and managers should not expect population growth rates similar to those observed during the 1980s and 1990s in core areas of the population”).

Response: Partially disputed as to Federal Defendants’ allegation that the Greater Yellowstone Ecosystem grizzly bear population has reached the area’s “carrying capacity.” See response to ¶ 45.

48. *Because the 2002-2014 population was stabilizing due to density-dependent interactions in the system, FWS and other experts concluded that FWS’ recovery requiring maintenance of the population around this period of stability (2002-2014) is likely to maintain a healthy, viable population into the foreseeable future. FWS_Rel_Docs:1445-48; FWS_Rel_Docs:5167.*

Response: Disputed. First, Federal Defendants’ allegation that the population has stabilized due to density-dependent interactions is argumentative, and Plaintiffs respond to this point in their briefs. *See* response to ¶ 45 (explaining why the population arguably has not reached the area’s carrying capacity); *see also* FWS_Rel_Docs:005174 (Peer Reviewer stating: “The data needed to demonstrate density dependence is beyond most wildlife monitoring programs and particularly so for large carnivores.”); FWS_Rel_Docs:005186 (Peer Reviewing stating: “[T]he documentation of density dependence in the [Greater Yellowstone Ecosystem] grizzly bear population remains uncertain.”). Additionally, Federal Defendants’ assertion ignores the fundamental point that the grizzly bear population has been stable since 2002, FWS_Rel_Docs:005761, while the bears’ range has significantly expanded, FWS_LIT:005761 (noting 38% increase in range between 2004 and 2010), which logically can mean only that the density of the bear population did not increase between 2002 and 2014. Second, Federal Defendants’ allegation that a viable population will be ensured into the foreseeable future

is argumentative, and Plaintiffs respond to this point in their briefs. *See* response to ¶ 25 (explaining that scientists agree that an isolated population of only 600-700 grizzly bears is not viable in the long-term).

49. *As with the habitat criteria, the demographic criteria have been met. FWS_Rel_Docs:1445-47. From as low as 136 bears in the 1970s, the population grew and has remained over 500 bears since 2007. FWS_Rel_Docs:1447. Independent female survival rates are high and remain unchanged for 30 years. Id.:1558. Females with cubs-of-the-year substantially increased; since at least 2001, females with young occupied at least 16 of 18 Greater Yellowstone Ecosystem bear management units. Id.:1447 (Table 1). And the population exhibited substantial positive growth trends, increasing at 4-7% annually through the 1990s and stabilizing at or approaching the carrying capacity of the Greater Yellowstone Ecosystem in the 2000s. Id.; FWS_LIT:16430; FWS_LIT:33117; FWS_LIT:16502; FWS_LIT:893.*

Response: Partially disputed. First, for clarification, Federal Defendants' conclusion that all demographic criteria have

been met was premised on data current through 2015 only. *See* response to ¶ 30. Second, this conclusion is incorrect even as for that period — in 2015, independent female mortality was 10.1% of the population, exceeding the recovery criterion’s limit of 9%.

FWS_LIT:023255. Third, for clarification, even if Federal Defendants are correct, the demographic monitoring criteria had been met by the Greater Yellowstone Ecosystem population of grizzly bears only. FWS_Rel_Docs:001445–47. Fourth, Federal Defendants’ allegations regarding the population’s “substantial positive growth” and that it has stabilized or reached the area’s carrying capacity is argumentative, and Plaintiffs respond to this point in their briefs. *See* responses to ¶¶ 46, 45, 30.

50. *FWS’ recovery criteria are accompanied by a robust, inter-agency monitoring and evaluation.*

FWS_Rel_Docs:1561-64. This monitoring includes the Interagency Study Team’s monitoring and evaluation of mortalities, human-bear conflicts, vital rates and demographics, trends in population growth, trends in location and availability of food sources, connectivity, and numerous other factors. See, e.g.,

FWS_LIT:16988-95; 17017-37, 17052-66, 17074-75, 17080-17087.

This monitoring and evaluation will continue to occur, inform management decisions, and ensure the continued recovery of the grizzly bear population. Id.; FWS_Rel_Docs:1561-64.

Response: Partially disputed. First, for clarification, monitoring and evaluation will only occur within the Demographic Monitoring Area. FWS_Rel_Docs:001436; FWS_FWS_Rel_Docs:002284–85. Second, Federal Defendants’ allegation that the monitoring and evaluation will ensure the continued recovery of the population is argumentative, and Plaintiffs respond to this point in their briefs. *See* response to ¶ 25 (explaining that scientists agree that an isolated population of only 600-700 grizzly bears is not viable in the long-term). Third, ongoing monitoring and evaluation will fail to identify negative population trends in time to avoid harm to the population because of multiple built-in lags, including the slow responsiveness of the model-averaged Chao2 estimator to sudden changes in trend, the once-annual frequency of population estimates and mortality calculations, and the need to amend the Conservation Strategy to

update vital rates and other components of the population management program. *See* FWS_Rel_Docs:01524 (“There is indeed a lag time and, thus, the potential for the population to drop below the long-term average of 674.”); FWS_Emails:008027 (admitting lag time in Chao2 estimator); FWS_Emails:009005 (“There is indeed a lag time and the potential to exceed the [mortality] threshold is real.”); FWS_Rel_Docs:005207 (Peer Reviewer noting that “[d]uring potentially high mortality years . . . management responses may be lagging and allow population to dip <600 before corrective actions are taken.”). Additionally, the Conservation Strategy and final rule fail to ensure the continued recovery of grizzly bears, in part because FWS’s mortality thresholds do not limit the number of conflict mortalities. *See* FWS_Rel_Docs:002328 (“State plans provide for the take of conflict bears regardless of the current mortality quota upon consultation among all involved agencies.”); *See also* response to ¶ 41.

51. *With biological recovery of the Greater Yellowstone Ecosystem Segment, FWS initiated rulemaking in 2005 to address*

the conservation status of the Segment under the Endangered Species Act. 70 Fed. Reg. 69,854 (Nov. 17, 2005). FWS finalized the rule in 2007. 2007 Rule, 72 Fed. Reg. 14,886 (Mar. 29, 2007).

Response: Partially disputed. The allegation that the Greater Yellowstone Ecosystem Segment has achieved biological recovery is argumentative, and Plaintiffs respond to this point in their briefs. *See e.g.*, responses to ¶¶ 25 (explaining that scientists agree that an isolated population of only 600-700 grizzly bears is not viable in the long-term), 46 (documenting recent declines in population levels), and 34 (explaining that the rule fails to allow for essential connectivity between and among other grizzly bear populations).

52. *The U.S. District Court for the District of Montana vacated and remanded the 2007 Final Rule. Greater Yellowstone Coal. v. Servheen, 672 F. Supp. 2d 1105 (D. Mont. 2009), aff'd in part, rev'd in part, 665 F.3d 1015 (9th Cir. 2011). The Segment thereafter returned to its listed status as a threatened species under the 1975 Final Rule. See 75 Fed. Reg. 14,496 (Mar. 26, 2010).*

Response: Undisputed.

53. *On remand, FWS and the regional experts extensively researched and analyzed every facet of the grizzly bear's interaction with food resources in the Greater Yellowstone Ecosystem. See, e.g., FWS_LIT:5734, FWS_LIT:888; FWS_LIT:2293; FWS_LIT:3422; FWS_LIT:4485; FWS_LIT:11549; FWS_LIT:16502.*

Response: Partially disputed as to the allegation that the FWS and regional experts researched and analyzed “every facet” of the grizzly bear’s interaction with food sources in the Greater Yellowstone Ecosystem. For example, the FWS failed to consider the impact of the grizzly bear’s increased reliance on meat as a food source. *See* ECF_190:9–14 (Plaintiffs’ summary judgment brief detailing, with record citations, how FWS and its scientists failed to consider the mortality consequences of the bears’ increased reliance on meat as a food source); *See also* FWS_Rel_Docs:001471 (acknowledging that “in years with poor whitebark pine seed production, grizzly bears shifted their diets and consumed more meat”); FWS_Pub_Cmt:005973, 005992–93 (noting that as bears seek livestock and offal to feed upon in the

absence of whitebark pine seeds, they necessarily venture closer to hunters and ranchers associated with those food sources resulting in increased conflict and consequent mortality);

FWS_Rel_Docs:001470 (noting that additional deaths in years with poor whitebark pine production “are primarily due to defense of life encounters and wildlife management agency removals of conflict bears”). In the 2017 final rule, the Service failed to account for the emerging threat to grizzly bears posed by the dietary shift to meat, despite comments from scientists raising this precise issue during the public comment period. FWS_Pub_Cmt:005991–93 (Letter from David J. Mattson, Ph.D.); FWS_Emails:027035 (Peer Reviewer raising concern that greater meat consumption among females with cubs will expose cubs to predation).

54. *The agencies further studied and analyzed the recovery requirements of the bears, the regulatory mechanisms governing management of grizzly bears, and the other statutory factors governing the listing (or delisting) of animals under the Endangered Species Act. See generally FWS_Rel_Docs:1437-38; 81 Fed. Reg. 13,174 (Mar. 11, 2016).*

Response: Partially disputed. Note that FWS did not study and analyze *all* recovery requirements for grizzly bears. For example, the FWS did not consider the impact of delisting the Greater Yellowstone Ecosystem Segment upon the recovery of the species as a whole. *See e.g., FWS_Rel_Docs:001557* (explaining that “consideration and analyses of grizzly bear populations elsewhere in the lower 48 States is outside the scope of this rulemaking.”).

55. *FWS and other agencies, for example, worked with the states of Montana, Idaho, and Wyoming to address the regulatory mechanisms in place post-delisting.*

FWS_Rel_Docs:1437-38, 1448-49. In 2007, Federal and state agencies finalized the 2007 Conservation Strategy, which codified a coordinated, multi-agency approach to managing and monitoring the grizzly bear population and ensuring its long-term viability into the foreseeable future. Id.:1448; FWS_LIT:15573 (2007 Conservation Strategy).

Response: Undisputed.

56. *The signatories to the 2007 Conservation*

Agreement continued, and improved, this coordinated management approach on remand. FWS_Rel_Docs:1448-49. With the emerging information on the population stabilizing at or near the carrying capacity of the Greater Yellowstone Ecosystem, the signatories updated the Strategy's mortality management and monitoring framework to align with FWS' recovery criteria and the emerging scientific evidence. FWS_LIT:17017-17037, 17070-75.

Response: Disputed. First, the FWS is referring to the Conservation *Strategy*, not a “Conservation Agreement.” Second, as noted in the response to ¶ 45, the allegation that the Greater Yellowstone Ecosystem Segment has reached carrying capacity is argumentative, and Plaintiffs respond to this point in their briefs. Third, Federal Defendants omit that several revisions to the 2007 Conservation Strategy actually weakened protections for grizzly bears instead of “improving” the document as Federal Defendants allege. For example: (1) the 2016 Conservation Strategy abandoned provisions that generally required management agencies to attempt to resolve grizzly conflicts through relocation

before killing the offending bear, *compare* FWS_LIT:015633–34 (2007 Conservation Strategy) *with* FWS_LIT:017073–74 (final 2016 Conservation Strategy); (2) the 2016 Conservation Strategy abandoned a commitment to maintain secure grizzly bear habitat within a Primary Conservation Area at or above levels that existed in 1998, *compare* FWS_LIT:015612–14 (2007 Conservation Strategy) *with* FWS_LIT:017039–40 (final 2016 Conservation Strategy); and (3) the 2016 Conservation Strategy abandoned a requirement that state management agencies use the Chao2 method to estimate the bear population size, committing only to using the Chao2 method for the “foreseeable future,” *compare* FWS_LIT:015581 (2007 Conservation Strategy) *with* FWS_LIT:017030 (final 2016 Conservation Strategy).

57. *The Conservation Strategy also was scrutinized by the experts to ensure that it identified and defined the monitoring and evaluation frameworks, the objective habitat and population standards and clear management responses, and the other aspects of coordinated State and Federal management of grizzly bears that ensures the maintenance of a long-term viable grizzly bear*

population. See, e.g., FWS_Rel_Docs:1448 (Conservation Strategy represents 20 years of a collaborative, interagency effort among the members of the Yellowstone Ecosystem subcommittee); FWS_Rel_Docs:5165 (independent peer review of, inter alia, the conservation strategy).

Response: Disputed. For example, experts also acknowledged that the Conservation Strategy lacks critical assurances relating to recalibration if a new population estimator is used (*see* response to ¶ 44), contains unsustainably high mortality allowances (*see e.g.*, FWS_Emails:033888 (International Association for Bear Research and Management commenting that “[a]llowable female mortality rates ... would not be sustainable”); FWS_Rel_Docs:005179 (Peer Reviewer stating “[m]y major concerns on the allowable number of mortalities are: 1) the basis for the allowable number of total mortalities, 2) the high level of allowable and the potential to overshoot (i.e., excessive mortality) the target population size with hunting”)), and fails to impose any meaningful limit on conflict mortality (*see* ECF_190:14–18

(Plaintiffs' summary judgment brief, record citations, detailing omission of conflict mortality limits)).

58. *In March 2016, FWS issued a proposed rule designating the Greater Yellowstone Ecosystem grizzly bear distinct population segment (Segment) and removing the species from the ESA's lists of threatened and endangered species. 81 Fed. Reg. 13,174. The proposed rule also provided notice and solicited public comment on FWS' draft supplement to the demographic criteria in its recovery plan and the draft 2016 Conservation Strategy. Id.*

Response: Undisputed. However, for clarification, the draft rule package released for public comment failed to contain state regulatory mechanisms to review. FWS_LIT:019256–57 (proposed rule indicating that state regulatory mechanisms must be put in place for delisting to occur). Further, the draft Conservation Strategy released for public comment underwent substantial revision throughout the rulemaking process and was never released for subsequent public comment despite having departed in critical ways from the earlier draft in a manner that weakened

grizzly protections and that the public could not have reasonably anticipated. For example, changes included: (1) Abandoning provisions that generally required an attempt to resolve grizzly conflicts, including livestock depredations, through at least one relocation before killing the offending bear, *compare* FWS_LIT:016367 (draft containing relocation requirements) *with* FWS_LIT:017073 (final omitting requirements); (2) Abandoning a commitment to maintain secure grizzly bear habitat within a designated 9,210 sq. mi. conservation area at or above levels that existed in 1998, which were believed to correlate with an increasing bear population, FWS_LIT:016336–37, and instead announcing formation of a planning group to propose unspecified “revisions to the 1998 habitat standards” based on an asserted need for, among other things, “more administrative infrastructure,” FWS_LIT:017039–40; and (3) Responding to the threat that a future change in grizzly population estimation methodology could open the door to a dramatic increase in allowable grizzly bear mortality under the Conservation Strategy management framework by adding a vague assurance tat the

current estimation methodology — the Chao2 estimator — will continue to be used “for the foreseeable future.” FWS_LIT:017030.

59. *In addition to receiving over 665,000 public comments on the Proposed Rule, FWS_Rel_Docs:1480, FWS solicited and received five independent peer reviews of the proposed rule, the draft recovery plan supplement, and the draft conservation strategy, FWS_Rel_Docs:5165.*

Response: Undisputed. However, for clarification, the final documents, including the final rule and the final 2016 Conservation Strategy did not undergo a subsequent round of peer review and instead, only the draft documents were commented on. FWS_LIT:019227; *see also* response to ¶ 58 (describing significant changes between draft and final Conservation Strategy).

60. *Among other findings, peer reviewers concluded that “the Federal Register Proposed Rule, Conservation Strategy, and Grizzly Bear Recovery Plan Draft Supplement are all rigorous and scientifically sound documents. I could find no errors of logic or scientific method,” FWS_Rel_Docs:5167, the documents and process represent “a robust and well-considered approach that*

meets the highest standards of science-based management and conservation,” id., FWS’ recovery plans “provide a science-based approach to the [Segment] grizzly bears management and conservation,” id., “the proposed rule [is] remarkably comprehensive and conservative ... and [c]learly the [Segment] has far exceeded recovery criteria and the probability of long-term persistence is extremely close to one,” id.:5199, and “the long-term viability of this population is secure,” id.:5211.

Response: Undisputed as to the content of the quoted material, however, for clarification, Peer Reviewers were also critical of the FWS’ rule package. For example, Federal Defendants omit critical negative statements in the Peer Review, including: (1) “Concurrent declines in the abundance of multiple food sources could force bears outside core protected areas and into increased conflict with humans on private and public lands, which in turn could lead to population declines below the desired threshold given that bears could be increasingly euthanized for human safety reasons,” FWS_Rel_Docs:005204; (2) “[O]verharvest and a potential subsequent lag in management response could

drive bear numbers below the desired minimum population size,” FWS_Rel_Docs:005205; (3) there is a “need to calibrate any new estimation method with the previous approaches to ensure long-term comparability of data,” FWS_Emails:027007; (4) “The basis for [FWS’s] mortality rates is unclear and the rates are at the higher end of the range of what I would consider sustainable,” FWS_Rel_Docs:005179. *See also* FWS_Rel_Docs:005170 (criticizing guidelines for road construction); FWS_Rel_Docs:005173 (recommending “an assessment of the survival rates and reproductive rates of grizzly bears that feed on whitebark pine compared to those that do not”); FWS_Rel_Docs:005176 (expressing doubt about FWS’s conclusion that “livestock allotments inside the [Primary Conservation Area] will not constitute a threat to the [Greater Yellowstone Ecosystem] grizzly bear [Distinct Population Segment] now, or in the future”); FWS_Rel_Docs:005176 (“That up to 4% of all suitable habitat in the [Primary Conservation Area] is available for [mineral] surface occupancy is an issue of concern for the conservation of the [Greater Yellowstone Ecosystem Distinct

Population Segment]”); FWS_Rel_Docs:005177 (“I am not convinced with the finding that snowmobiling does not constitute a threat to the [Greater Yellowstone Ecosystem] grizzly bear [Distinct Population Segment] ... Of particular concern is the risk of den abandonment by females with young cubs”); FWS_Rel_Docs:005719 (noting “the potential to overshoot . . . the target population size with hunting”); FWS_Rel_Docs:005179 (stating that plan to conduct demographic review every five to ten years is “inadequate”); FWS_Rel_Docs:005180 (criticizing FWS conclusion that legal hunting will reduce the amount of illegal poaching); FWS_Rel_Docs:005184 (noting that “the potential . . . exists for excessive harvest, which could put the core conservation value of the [Greater Yellowstone Ecosystem] grizzly bears at risk”); FWS_Rel_Docs:005185 (“[U]se of baits in Wyoming and Idaho . . . may be a risk to the long-term conservation and management of” grizzly bears); FWS_Rel_Docs:005186 (criticizing FWS’s conclusion that the grizzly bear population has reached carrying capacity); FWS_Rel_Docs:005192 (criticizing FWS’s discussion of human-caused mortality); FWS_Rel_Docs:005193,

005199–200 (criticizing FWS’s discussion of habitat management); FWS_Rel_Docs:005196 (“Consideration should be given to eliminate vacant livestock allotments if chronic grizzly bear conflicts have occurred on these allotments in the past.”); FWS_Rel_Docs:005197 (criticizing FWS’s method for assigning sex to orphaned cubs); FWS_Rel_Docs:005198 (criticizing FWS’s treatment of grizzly bear mortality outside the [Demographic Monitoring Area]); FWS_Rel_Docs:005202 (criticizing FWS’s “lower population target of 500” and stating that “it cannot be defended based on science”); FWS_Rel_Docs:005203 (stating that “[w]ithout clear evidence of connectivity to other grizzly populations . . . in the 6 recovery ecosystems, nor concrete implementation plans for creating redundant populations elsewhere through reintroductions (e.g. Bitterroots), the [Greater Yellowstone Ecosystem] population would remain vulnerable to local extinction”); FWS_Rel_Docs:005196–97, 005201, 005204, 005211 (criticizing FWS’s treatment of habitat connectivity); FWS_Rel_Docs:005207 (noting that “[d]uring potentially high mortality years . . . management responses may be lagging and

allow population to dip <600 before corrective actions are taken”); FWS_Rel_Docs:005210 (criticizing FWS’s treatment of livestock allotments).

61. *For the draft conservation strategy, peer reviewers concluded that the draft conservation strategy, inter alia, “is a scientifically sound and logical approach to ensure the long-term viability of the [Segment],” FWS_Rel_Docs:5171, “is a very robust and well-considered approach that meets the highest standards of science-based management and conservation,” id., “is adequate to reasonably ensure the long-term viability of the [Segment] grizzly bear population,” id.:5197, “[t]here is no basis for concern about the long-term viability of the population except for the fact that we cannot anticipate the future,” id.:5201, and “this conservation strategy is adequate to facilitate the long-term viability of this grizzly bear population. The Strategy outlines myriad techniques in a comprehensive framework to ensure this,” id.:5211.*

Response: Undisputed as to the content of the quoted material, however, for clarification, peer reviewers were also critical of the FWS’ rule package. See response to ¶60.

62. *FWS agreed with the expert reviews, finding that the “comprehensive approach to recovery [that] has led to reduced mortality, increased population numbers, and significant increases in range, and has allowed grizzly bears to reoccupy habitat they have been absent from for decades while ensuring demographic and habitat security into the foreseeable future.”*

FWS_Rel_Docs:1491; id.:1448-49 (addressing the Conservation Strategy signatories’ track records and proven successful approach to protecting habitat and monitoring and managing this grizzly bear population).

Response: Undisputed as to the quoted material. But also note that peer reviewers expressed concerns with the FWS’ conclusions. See response to ¶ 60.

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63. *After considering and responding to public comment and the peer reviews, and after a thorough evaluation of the wealth of scientific information on this grizzly bear population — including over 30 annual reports, hundreds of peer-reviewed journal articles, dozens of theses, technical reports, and other*

information, FWS_Rel_Docs:1441 — FWS issued a final rule designating the Greater Yellowstone Ecosystem Distinct Population Segment and removing the species from the ESA’s Lists. 2017 Rule, 82 Fed. Reg. 30,502. FWS also issued a final 2017 supplement to its recovery plan, FWS_LIT:16422, and the Conservation Strategy was finalized and signed. See FWS_LIT:16978; FWS_LIT:17111 (2016 Conservation Strategy and Appendices).

Response: Partially disputed. For clarification, the FWS did not consider the impact of delisting the Greater Yellowstone Ecosystem Segment upon the recovery of the species as a whole. *See e.g., FWS_Rel_Docs:001557* (explaining that “consideration and analyses of grizzly bear populations elsewhere in the lower 48 States is outside the scope of this rulemaking.”). Further, FWS failed to consider the mortality consequences of the bears’ shift to a meat-based diet, and further failed to consider loopholes in the final 2016 Conservation Strategy that result in no meaningful limit on conflict mortality in the Greater Yellowstone Ecosystem. *See e.g., ECF_190:9–18* (Plaintiffs’ summary judgment brief, with record citations, detailing this issue); *see also* response to ¶ 53.

64. *Consistent with its recovery planning in the lower 48 states and its prior implementation of the ESA, FWS_Rel_Docs:1449-50, FWS recognized the Greater Yellowstone Ecosystem grizzly bear population as a distinct population segment under the ESA, id.: 1450-52. FWS found that the population is discrete from other grizzly bear populations, “significant to the remainder of the taxon (i.e., Ursus arctos horribilis),” and therefore meets the definition of a “distinct population segment” under the ESA and its distinct population segment policy. Id.:1452; see also 61 Fed. Reg. 4722 (Feb. 7, 1996) (FWS’ distinct population segment policy).*

Response: Disputed. Federal Defendants’ allegation is argumentative, and Plaintiffs respond to this point in their briefs. For clarification, in the FWS’ August 2011 Five-Year Review of the lower 48 State grizzly listing, the Service found the lower 48 State listing (as a whole) is discrete from other grizzly populations and significant to the remainder of the taxon, and thus qualifies as a distinct population segment under the ESA. FWS_LIT:016078. Further, in making its distinct population

segment finding for the Greater Yellowstone Segment in the final rule, the FWS recognized that the U.S. Federal District Court for the District of Columbia had disapproved an identical use of the ESA's distinct population segment language in the case of *Humane Society of the United States v. Jewell*, 76 F. Supp. 3d 69 (D.D.C. 2014), but stated that “[w]e respectfully disagree with the [D.C.] district court’s interpretation of the [distinct population segment] policy.” FWS_Rel_Doc:001450. Additionally, the Service in the final rule explicitly and repeatedly declined to consider the status of the already listed grizzly bear entity, the lower 48 State grizzly population, or the impact of its Yellowstone grizzly segment delisting decision on the status or conservation of that entity, stating that “consideration and analyses of grizzly bear populations elsewhere in the lower 48 States is outside the scope of this rulemaking.” FWS_Rel_Docs:001479; *accord* FWS_Rel_Docs:001485, 001557.

65. *FWS next thoroughly analyzed each of the five statutory factors Congress identified as informing FWS’ decision*

on whether the Segment is a threatened species or an endangered species. FWS_Rel_Docs:1452-1478; 16 U.S.C. § 1533(a)(1)(A)-(E).

Response: Disputed. Federal Defendants’ allegation is argumentative, and Plaintiffs respond to this point in their briefs. For example, the FWS failed to thoroughly consider the cumulative impacts of all of the threat factors of 16 U.S.C § 1533(a)(1)(A)-(E) combined. *See* FWS_Rel_Docs:001477 (admitting that many “of the threats faced by grizzly bears are interrelated and could be synergistic” and threats “may cumulatively impact” the Yellowstone grizzly segment, but then concluding that no cumulative threats exist); *see also* ECF_186:29–33 (Plaintiffs’ summary judgment brief explaining how the FWS failed to consider cumulative effects). Further, FWS failed to consider the mortality consequences of the bears’ shift to a meat-based diet, and further failed to consider loopholes in the final 2016 Conservation Strategy that result in no meaningful limit on conflict mortality in the Greater Yellowstone Ecosystem. *See e.g.*, ECF_190:9–18 (Plaintiffs’ summary judgment brief, with record citations, detailing this issue); *see also* response to ¶ 53.

66. *FWS considered, for example, the present or threatened destruction, modification, or curtailment of the Segment's habitat or range, where FWS assessed the habitat conditions and protections in place throughout the Segment's range. FWS_Rel_Docs:1453-1459.*

Response: Disputed. Federal Defendants' allegation is argumentative, and Plaintiffs respond to this point in their briefs. For example, the FWS failed to consider the loss of the species' historic range in its analysis. FWS_Rel_Docs:001479 (stating "consideration and analyses of grizzly bear populations elsewhere in the lower 48 States is outside the scope of this rulemaking.").

67. *In the Greater Yellowstone Ecosystem, the primary conservation area consists of 51% of the suitable habitat within the Greater Yellowstone Ecosystem, but it supports a high proportion of the bears (i.e., 75% of the females with cubs occupy this area). FWS_Rel_Docs:1460. The National Park Service and U.S. Forest Service, in turn, manage 98% of this habitat, and they have implemented protections that render this habitat secure for grizzly*

bears — the 1998 baseline conditions for motorized access, secure habitat, developed sites, livestock allotments, and other factors. Id.

Response: Undisputed. However, for clarification, the final 2016 Conservation Strategy abandons the draft Conservation Strategy’s commitment to maintain secure grizzly bear habitat within a designated 9,210 sq. mi. conservation area at or above levels that existed in 1998, FWS_LIT:016336–37, and instead announces formation of a planning group to propose unspecified “revisions to the 1998 habitat standards” based on an asserted need for, among other things, “more administrative infrastructure.” FWS_LIT:017039–40.

68. *The Interagency Grizzly Bear Study Team will continue to monitor compliance with the 1998 standards, as well as the demographic characteristics of the bears occupying this area. FWS_Rel_Docs: 1460. With these and other protections, this area “will remain a highly secure area for grizzly bears, with habitat conditions maintained at or above levels documents in 1998” and the “time when the population was increasing at a rate of 4 to 7 percent per year.” FWS_Rel_Docs:1459, 1460.*

Response: Partially disputed. For clarification, monitoring and evaluation will occur within the Demographic Monitoring Area only. FWS_Rel_Docs:001436; FWS_FWS_Rel_Docs:002284–85. *See also* response to ¶ 67 (noting that the final 2016 Conservation Strategy omits assured maintenance of the 1998 baseline and instead announces an interagency planning group will soon propose unspecified “revisions to the 1998 habitat standards” based on an asserted need for, among other things, “more administrative infrastructure,” FWS_LIT:017039–40).

69. *FWS also found that suitable habitat outside the primary conservation area boundaries will continue to be managed responsibly, including through the Forest Service’s management of lands that limits motorized access, the protections afforded by wilderness area designations, and other measures that protect bears and facilitate their connectivity with other populations. FWS_Rel_Docs:1460. FWS determined that these suitable habitat areas outside the area boundaries “provide[] additional ecological resiliency and habitat redundancy to allow the population to respond to environmental changes.” Id.*

Response: Partially disputed. First, see response to ¶ 28 (noting that none of the National Forests have directly adopted, revised, or amended their forest plans to incorporate the final text of the 2016 Conservation Strategy and some changes remain necessary). Second, state regulations permit recreational hunting outside of the National Parks, including on National Forest lands, thus hampering potential connectivity. FWS_Rel_Docs:001464, 001466; *see also* response to ¶ 34 (documenting FWS stated need for connectivity assurances and states’ refusal to commit to this).

70. *Thus, FWS determined that habitat conditions and protections in place provide resiliency and redundancy to the Segment population, allowing it to respond to environmental and other changes in the foreseeable future. FWS_Rel_Docs:1460.*

Response: Disputed. Federal Defendants’ allegation is argumentative, and Plaintiffs respond to this point in their briefs. *See* ECF_186:40–44 (Plaintiffs’ summary judgment brief, with record citations, detailing this issue).

71. *FWS’ analysis of human-caused mortality followed a similar, searching review of the facts and evidence.*

FWS_Rel_Docs:1460-1467. Human-caused mortalities were one of the primary factors leading to the listing of the species in 1975, and FWS paid close attention to the management frameworks in place that address and regulate human-caused mortality in the Greater Yellowstone Ecosystem. Id.

Response: Disputed. Federal Defendants’ allegations are argumentative, and Plaintiffs respond to this point in their briefs. For example, FWS failed to consider the mortality consequences of the bears’ shift to a meat-based diet, and further failed to consider loopholes in the Conservation strategy that result in no meaningful limit on conflict mortality in the Greater Yellowstone Ecosystem. *See e.g.* ECF_190:9–18 (Plaintiffs’ summary judgment brief, with record citations, detailing this issue); *see also* response to ¶ 53.

72. *FWS, for example, analyzed all aspects of human-caused mortality, including rates and numbers, since the 1980s. FWS_Rel_Docs:1461-62. This evaluation showed the past levels of human-caused mortality and the population’s response — i.e., with an average of 23.9 human caused mortalities from 2002-2014, the*

population continued to grow, expand its range, and become influenced heavily by high bear densities. Id.:1467; see also FWS_LIT:10684-87; FWS_LIT:11508-10; FWS_LIT:33441-42; FWS_LIT:33143; FWS_LIT:884-886.

Response: Disputed. Federal Defendants’ allegation is argumentative, and Plaintiffs respond to this point in their briefs. FWS did not consider *all aspects* of human-caused mortality. *See e.g.*, response to ¶ 46 (omitting 2015 data). FWS also failed to consider increased levels of human-caused mortality resulting from the grizzly bears’ dietary shift to more meat in the absence of whitebark pine seeds. *See* response to ¶¶ 53, 71. Additionally, the final rule discounts the allegation that the population “continued to grow” between 2002 and 2014, instead stating that there was “no statistical trend in the population trajectory” over that time period. FWS_Rel_Docs:001436. Further, while Federal Defendants assert that the Yellowstone grizzly bear population has “become influenced heavily by high bear densities,” none of the record materials Federal Defendants cite suggest that the population has been influenced by “high bear densities.” *See also* response to ¶45.

Finally, Federal Defendants' assertion ignores the fundamental point that, because the grizzly bear population remained stable since 2002, FWS_Rel_Docs:005761, while the bears' range has significantly expanded, FWS_LIT_005761 (noting a 38% increase in range between 2004 and 2010), the density of the bear population could not logically have increased between 2002 and 2014. *See also* response to ¶30.

73. *This information allowed FWS to consider the efficacy of the mortality management in place under the Conservation Strategy (and associated State and Federal laws, regulations, and management plans) for maintaining recovery into the foreseeable future. FWS_Rel_Docs:1461-68. Under these authorities, grizzly bear mortality is addressed through a combination of management, monitoring, and outreach. Id.*

Response: Disputed. Federal Defendants' allegations are argumentative, and Plaintiffs respond to this point in their briefs. For example, multiple flaws and faulty assumptions in the Conservation Strategy's system for estimating annual population and distributing discretionary mortality limits will allow excessive

mortality that will go undetected by ongoing monitoring.

ECF_194:15–24 (Plaintiffs’ summary judgment brief, with record citations, detailing these issues). For instance, the Interagency Study Team’s population estimator assumes a fixed 1:1 ratio of male and female bears in the population based on observations made prior to delisting, yet fails to account for the Conservation Strategy’s own allowance for substantially higher annual male mortality. ECF_194:15–24 (Plaintiffs’ summary judgment brief, with record citations, detailing this issue); *See also*

FWS_Emails:008489; FWS_Emails:008597–008600;

FWS_Emails:009005–06. And, the unlimited mortality that the states may permit outside the Demographic Monitoring Area — including Wyoming’s approved hunt of 12 bears of any sex — are not counted against the mortality limits at all, despite the effects on the population these deaths will have. ECF_194:15–24 (Plaintiffs’ summary judgment brief, with record citations, detailing this issue); *See also* FWS_Rel_Docs:000201;

FWS_Emails:027038; FWS_Pub_Cmt:0006039;

FWS_Pub_Cmt:002710; FWS_Pub_Cmt:002009;

FWS_Pub_Cmt:003320. Further, FWS omits that the post-delisting mortality management framework imposes no meaningful limit on conflict mortality in the Greater Yellowstone Ecosystem. *See e.g.* ECF_190:14–18 (Plaintiffs’ summary judgment brief, with record citations, detailing this issue).

74. *For example, the States of Montana, Idaho, and Wyoming have classified grizzly bears as a big game animal; the states therefore regulate bear mortality within the portions of the Greater Yellowstone Ecosystem that are subject to state regulation. FWS_Rel_Docs:1461. The state management objectives are to ensure not only that the population remains above 500 bears — which preserves the short-term genetic health of the population — but is managed around the average 2002-2014 population estimate of 674 (95% confidence interval range of 600-747). Id.:1463.*

Response: Partially disputed. *See* response to ¶38 (describing State and/or agency interpretations of the 500 minimum population number as a target). Additionally, Federal Defendants’ allegation that the States’ hunting regulations and frameworks are adequate to ensure a recovered Yellowstone

grizzly population into the future is argumentative, and Plaintiffs respond to this point in their briefs. For example, Wyoming has adopted a regulation opening a grizzly bear hunt beginning September 1, 2018 and will allow the killing of 1 female and 10 male bears within the Demographic Monitoring Area (exceeding their allocation of discretionary mortality under the Memorandum of Agreement based on the Interagency Study Team's 2017 Annual Report⁶ — 0.87 female and 9.86 males bears — as to both sexes), as well as the killing of 12 bears of any sex outside of the Demographic Monitoring Area. 40 Wyo. Admin. Rules. Ch. 68(6); *see also* report citation in note 6. Further, for clarification, note that state-regulated hunting may occur throughout the segment boundary outside of the National Parks, including in the Primary Conservation Area and Demographic Monitoring Area on National

⁶ Yellowstone Grizzly Bear Investigations 2017, Annual Report of the Interagency Grizzly Bear Study Team (2017) available at https://prd-wret.s3-us-west-2.amazonaws.com/assets/palladium/production/s3fs-public/atoms/files/2017_AnnualReport_Final_tagged_Secured.pdf (last visited Aug. 7, 2018).

Forest lands as well as lands under the states' jurisdiction. *See* FWS_Rel_Docs:001463–64 (describing where hunting may occur).

75. *The states do so by adhering to mortality limits tied to the Interagency Study Team's annual population estimates and analysis of mortality. FWS_Rel_Docs:1463-64. These mortality limits include mortalities that were authorized while the species was listed as a consequence of FWS' 4(d) rule (50 C.F.R. § 17.40(b)). The 4(d) rule allowed bears to be killed in self-defense, defense of others, or by agency removal of conflict bears. Id.:1461. The mortality limits also include new discretionary sources of mortality, such as any hunting mortality authorized by the States. Id.:1464-65.*

Response: Disputed. First, for clarification, mortality limits only apply within the Demographic Monitoring Area.

FWS_Rel_Docs:001436; FWS_FWS_Rel_Docs:002285. Second, while Federal Defendants assert that the states will ensure the bear population remains at about 674 bears by following the Conservation Strategy's mortality thresholds, Federal Defendants omit that the Conservation Strategy's mortality thresholds impose

no meaningful limit on conflict mortality. *See* response to ¶ 41.

Further, Federal Defendants allege that removal of conflict bears was permitted under the ESA management regime, but omit that the ESA provided important protections for conflict bears, including a requirement that bears killing livestock or causing other damage to human property could be killed only if “[i]t has not been reasonably possible to eliminate such threat or depredation by live-capturing and releasing unharmed in a remote area the grizzly bear involved.” 50 C.F.R. § 17.40(b)(1)(i)(C).

Finally, these mortality limits do not bind the states — as Wyoming has baldly admitted, ECF_194:8–9 — and Wyoming has already approved a hunt that exceeds its allocation of discretionary mortality. *See* response to ¶ 74.

76. *The mortality rates and limits are designed to maintain the population within the 2002-2014 population range, which corresponds to conditions where the population grew and then stabilized at or near the carrying capacity of the Greater Yellowstone Ecosystem’s suitable habitat. FWS_Rel_Docs:1463-64,*

1447-48; FWS_LIT:16423-27; see also FWS_LIT:16430; FWS_LIT:33117; FWS_LIT:16502; FWS_LIT:893.

Response: Disputed. Federal Defendants' allegations are argumentative, and Plaintiffs respond to this point in their briefs. See response to ¶¶ 45 (challenging FWS' carrying capacity allegation); 25 (challenging FWS's allegation of population viability into the foreseeable future and noting scientists' concerns with managing to a target population number); 41 (explaining that mortality thresholds impose no meaningful limit on conflict mortality); 46 (explaining that the final rule states there was no meaningful population growth between 2002 and 2014).

77. *This 2002-2014 population objective is implemented by use of higher mortality limits when the population is estimated at the upper end of the 95% confidence interval range, and lower mortality limits when it is estimated at the lower end of the 95% confidence interval range. FWS_Rel_Docs:1464 (Table 3); FWS_LIT:16427; FWS_LIT:16430-31; FWS_LIT:33117. These mortality limits takes into account all discretionary and non-discretionary mortality that occurs in the previous year, as*

estimated and analyzed by the Interagency Study Team.

FWS_Rel_Docs:1463-64 (Table 3); id.:1498, 1508, 1510, 1528;

FWS_LIT:17032, 17073.

Response: Partially disputed. For clarification, mortality limits only apply in the Demographic Monitoring Area.

FWS_Rel_Docs:001436; FWS_FWS_Rel_Docs:002284.

Furthermore, Wyoming has already approved a hunt that exceeds its 2018 discretionary mortality allocation as properly calculated based on the Interagency Study Team's estimate of 2017 mortality. *See* response to ¶ 74.

78. *Combined, this framework and other precautionary factors — including the Interagency Study Team's monitoring and evaluation of the population's vital rates and demographics, human-caused mortality rates and causes, and other factors — ensure that the population remains at stable population levels.*

FWS_Rel_Docs:1465-68.

Response: Disputed. Federal Defendants' allegations are argumentative, and Plaintiffs respond to this point in their briefs. First, note that monitoring will occur in the Demographic

Monitoring Area only. FWS_Rel_Docs:001436;

FWS_Rel_Docs:002285. Second, the FWS ignored the record high mortality levels of 2015-2017 in the final rule, ignored that adult female mortality had exceeded the recovery threshold in 2015, and in fact did not even consider 2016 mortality at all in the final rule.

See response to ¶ 30 (documenting 56 dead grizzly bears in 2017, 58 dead grizzly bears in 2016, and 61 dead grizzly bears in 2015).

Finally, Federal Defendants omit that the mortality thresholds impose no meaningful limit on conflict mortality. See response to ¶ 41.

79. *FWS extended its examination into other factors that, in theory, have the potential to impact the species, including: genetic health and connectivity; food resource availability; climate change; catastrophic events; human attitudes toward grizzly bear conservation; and other factors. FWS_Rel_Docs:1468-1478. FWS found that these and other factors are not a threat to the population now or in the foreseeable future. Id.*

Response: Disputed. Federal Defendants' allegations are argumentative, and Plaintiffs respond to this point in their briefs.

For example, FWS did not examine the impacts of increased mortality resulting from the bears' switch to a meat-based diet, *see* response to ¶ 53, nor did FWS examine these potential impacts cumulatively, *see* response to ¶ 65.

80. *The genetic diversity of the Greater Yellowstone Ecosystem population is four times above those levels recommended by the science, has not declined over last century, and is more than adequate to maintain healthy levels of reproduction and survival for decades. FWS_Rel_Docs:1477. The Conservation Strategy, moreover, includes clear and definitive commitments by states to facilitate management connectivity and, if needed, translocate bears to ensure that the population's genetic health does not pose a threat to this population. Id.*

Response: Disputed. Federal Defendants' allegations are argumentative, and Plaintiffs respond to this point in their briefs. *See e.g.*, FWS_Emails:00916 ("It is an overreach to state that the genetic health is 'very strong;' [the Yellowstone grizzly segment] remains an isolated population with lower genetic diversity than many other grizzly bear populations."); FWS_LIT:030548 (Traill

(2010) noting that small and isolated populations remain vulnerable to: (1) demographic fluctuation due to random variation in birth and death rates and sex ratio; (2) environmental fluctuation in resource or habitat availability, predation, competitive interactions and catastrophes; (3) reduction in cooperative interactions and subsequent decline in fertility and survival; (4) inbreeding depression reducing reproductive fitness; and (5) loss of genetic diversity reducing the ability to evolve and cope with environmental change); 83 Fed. Reg. at 18,741 (FWS stating that “the effective population size and heterozygosity levels of the [isolated Yellowstone grizzly segment] are only adequate for the next several decades [approximately 20 years].”); FWS_LIT:005979 (Klamath (2015) stating that the “historically small [effective population size], relatively low diversity, and isolation over many generations suggest the [Greater Yellowstone] grizzly population could benefit from increased fitness following the restoration of gene flow . . . particularly given the unpredictability of future climate and habitat changes.”). *See also* FWS_Emails:00917 (describing states’ refusal to properly manage

for connectivity assurances). Additionally, the record demonstrates that the states' commitments to facilitate connectivity are not "clear and definitive," as alleged. See response to ¶ 34 (documenting FWS's stated need for connectivity and states' refusal to commit to this).

81. *Nor is the availability of or shifts in food resources likely to threaten the population; grizzly bears are highly omnivorous and have demonstrated an ability to readily shift between available food resources. FWS_Rel_Docs:1469-73. Declines in single food resources, such [as] whitebark pine seeds, have not resulted in and are not likely to manifest deleterious effects to grizzly bear populations (now or likely in the foreseeable future). Id. And any potential for food or climate impacts to result in increased mortality is addressed through adherence to the mortality limits prescribed in the Conservation Strategy and Recovery Plan. Id.:1473-75, 1477-78.*

Response: Disputed. Federal Defendants' allegations are argumentative, and Plaintiffs respond to this point in their briefs. For example, see response to ¶ 53 (explaining FWS failed to

consider the negative impacts of grizzly bears' increased reliance on meat in the absence of whitebark pine seed availability).

Further, Federal Defendants ignore the fact that the mortality limits impose no cap on conflict mortality, which has grown in recent years due to the bears' shift to a meat-based diet. *See* response to ¶ 41. Finally, the Conservation Strategy's mortality limits are insufficient to protect the population from serious decline due to lag time in the estimator's capacity to detect population shifts, flaws in the mortality limits allowing for excessive, undetected male mortality inside the Demographic Monitoring Area and unlimited mortality outside the Demographic Monitoring Area, and the lack of legal effect binding or otherwise committing the states to follow those limits. *See* responses to ¶¶ 50, 73–75.

82. *The potential threats to the grizzly bears are manageable, and the responsible Federal, State, and other entities have put in place those mechanisms and resources to ensure that this grizzly bear population is managed responsibly and maintains recovery into the foreseeable future.*

FWS_Rel_Docs:1477-78. That is, while the Segment continues to face various factors that must be managed, monitored, and evaluated, the grizzly bear “population is stable (i.e., no statistical trend in the population trajectory), threats are sufficiently ameliorated, and a post-delisting monitoring and management framework has been developed and has been incorporated into regulatory mechanisms or other operative documents.” Id.:1436, 1478.

Response: Disputed. Federal Defendants’ allegations are argumentative, and Plaintiffs respond to this point in their briefs. For example, Federal Defendants assert that potential threats to the bear population are adequately addressed by the post-delisting management framework, but ignore the emerging threat to bears posed by their shift to a meat-based diet. *See* response to ¶ 53. Federal Defendants further ignore that the Conservation Strategy’s mortality thresholds do not address increased conflict mortality because they impose no meaningful limit on that mortality. *See* response to ¶ 41.

83. *The Conservation Strategy serves as the post-delisting monitoring plan and governs into the foreseeable future. FWS_Rel_Docs:1562. Among other monitoring and evaluation protocols the Interagency Grizzly Bear Study Team monitors and evaluates: the recovery plan's habitat standards and adherence to the 1998 baseline, reproductive success, litter size, litter interval, number of females with cubs of the year, distribution of females with young, overall population size and trends, genetics, and the overall condition of the bears. Id.:1561-63. The U.S. Forest Service monitors and evaluates habitat conditions, livestock allotments, food resources, vital rates, and mortalities. Id. The Interagency Study Team, the National Park Service, and the Forest Service coordinate the monitoring and evaluation of food resources and availability. Id.*

Response: Undisputed. However, for clarification, monitoring is only conducted in the Demographic Monitoring Area (FWS_Rel_Docs:001436; FWS_FWS_Rel_Docs:002285), and the Forest Service has yet to formally adopt the provisions of the 2016 Conservation Strategy into its land management plans, see

response to ¶¶ 27, 28. Finally, the National Park Service expressed serious concerns with the monitoring and management framework adopted in the final rule. See FWS_Emails:033423–033432 (comments from the National Park Service on the draft Conservation Strategy and proposed rule).

84. *“Because of the scope of monitoring, [FWS and other experts] feel confident that we will be able to detect the consequences of significant changes in habitat within a reasonable timeframe that would allow for appropriate management responses.” FWS_Rel_Docs:1562.*

Response: Disputed. Federal Defendants’ allegations are argumentative, and Plaintiffs respond to this point in their briefs. For example, multiple scientific experts and FWS biologists questioned whether the framework adopted in the final rule adequately allows for the detection of negative population impacts to occur within the timeframe necessary to prevent a catastrophic decline in the population’s numbers and range. See response to ¶ 42.

85. *FWS further prescribed rigorous post-delisting monitoring standards that trigger FWS' independent reviews and, if required, re-listing actions for this grizzly bear population.*

FWS_Rel_Docs:1563-64. Among other provisions, FWS will initiate full biological and ESA status reviews should mortality limits be exceeded or routinely violated, and FWS will evaluate any substantial management changes that are likely to manifest in population-level impacts. Id.

Response: Undisputed. However, for clarification, the ability to later re-list a species cannot be used as justification for delisting the species. *Greater Yellowstone Coalition, Inc. v. Servheen*, 665 F.3d 1015, 1029 (9th Cir. 2011). Further, note that FWS is not a voting member of the Greater Yellowstone Coordinating Committee, the interagency committee responsible for ensuring the post-delisting management framework outlined in the 2016 Conservation Strategy is adequately carried out. See ¶19 note 1.

86. *As FWS concluded, multiple independent lines of evidence support its findings and conclusions that “threats to this*

population and its habitat have been sufficiently minimized and the GYE grizzly bear DPS is a biologically recovered population,” no “factors alone or in combination that reach a magnitude that threatens the continued existence of the species now or in the foreseeable future,” and “[t]he best scientific and commercial data available indicate that the GYE grizzly bear DPS is not endangered or threatened throughout all of its range.”

FWS_Rel_Docs:1558.

Response: Disputed. Federal Defendants’ allegations are argumentative, and Plaintiffs respond to this point in their briefs. For example, Federal Defendants ignore evidence of the threat posed by bears’ switch to a meat-based diet, as well as the fact that the Conservation Strategy’s mortality limits offer no meaningful response to that threat. *See* response to ¶¶ 53, 41. Additionally, Federal Defendants ignore the best available science indicating that an isolated population of 600-700 bears is not biologically recovered. *See* responses to ¶¶ 41, 34; ECF_186:34–39 (Plaintiffs’ summary judgment brief, with record citations, detailing this issue).

Respectfully submitted this 8th day of August, 2018.

/s/ Matthew K. Bishop
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/s/ John R. Mellgren
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M-DLC*

CERTIFICATE OF SERVICE

I hereby certify that on this 8th day of August, 2018, I filed a copy of this document electronically through the CM/ECF system, which caused all ECF registered counsel to be served by electronic means, as more fully reflected on the Notice of Electronic Filing.

/s/ Matthew K. Bishop
Matthew K. Bishop